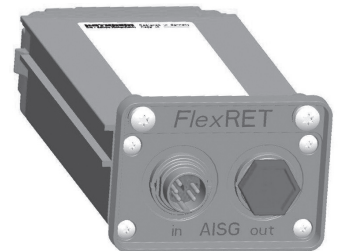


A flexible, integrated solution for adjusting the electrical downtilt of Kathrein FlexRET antennas.

- Compliant to AISG 1.1 and 3GPP/AISG 2.0
- Single RETs or Multi RET displayed
- Daisy Chain feasibility
- Pre-configured



Type No.	86010153
Protocols	compliant to AISG 1.1 and 3GPP/AISG 2.0
Logical interface ex factory ¹⁾	3GPP/AISG 2.0
Operates as	Single RETs or Multi RET
Ex factory	Single RETs
Input voltage range	10 ... 30 V (pin 1, pin 6)
Power consumption	< 0.5 W (stand by); < 10 W (motor activated)
Connectors ²⁾	2 x 8 pin connector according to IEC 60130-9; according to AISG Daisy chain in: male; Daisy chain out: female
Hardware interfaces	RS 485A/B (pin 5, pin 3); power supply (pin 1, pin 6); DC return (pin 7); according to AISG / 3GPP
Adjustment time (full range)	40 sec (typically, depending on antenna type)
Adjustment cycles	> 50,000
Temperature range	-40 °C ... +60 °C
Protection class	IP 24 (installed)
Lightning protection	AISG interface (each pin) 2.5 kA (10/350 μs) 8 kA (8/20 μs)
Housing material	Profile: Aluminum anodized; cover: Aluminum die cast coated
Weight	350 g (0.77 lbs)
Packing size	245 x 93 x 102 mm, (9.6 x 3.6 x 4 inches)
Dimensions (H x W x D)	142 x 71 x 50.4 mm, (5.6 x 2.8 x 2 inches)



¹⁾ The protocol of the logical interface can be switched from 3GPP/AISG 2.0 to AISG 1.1 with a vendor specific command. Start-up operation of the FlexRET is only possible in a RET system supporting 3GPP/AISG 2.0!

Please note:

If the Primary which controls the FlexRET system does not support the default ex-factory interface setting, then the RCU must be switched to the appropriate standard of the Primary before installation. Please contact Kathrein for further information.

²⁾ If the FlexRET of an antenna has to be replaced, the FlexRET gets the information stored in the antenna after power on automatically. It is not necessary to configure the FlexRET manually.

Standards: EN 60950-1 (Safety)
EN 60950-22 (Safety – Equipment installed outdoor)
EN 55022 (Emission)
EN 55024 (Immunity)
ETS 300019-1-4 (Environmental)
UL 60950-1; 1st edition

Certification: CE, FCC

Scope of supply: FlexRET

Optional: Site-Sharing-Adapter (86010154) to create independent logical interfaces at one antenna or site. Makes it possible to operate with more than one independent Node B.

936.4643 Subject to alteration.

Startup of FlexRET

The FlexRET module included in the antenna is preconfigured with the following information: Antenna model no., Antenna Serial no., Antenna configuration data. After connecting a control cable and scanning the antenna line devices (ALD) the used primary (e.g. NodeB, ALC, etc.) will find the FlexRET. You only need to insert your additional data.

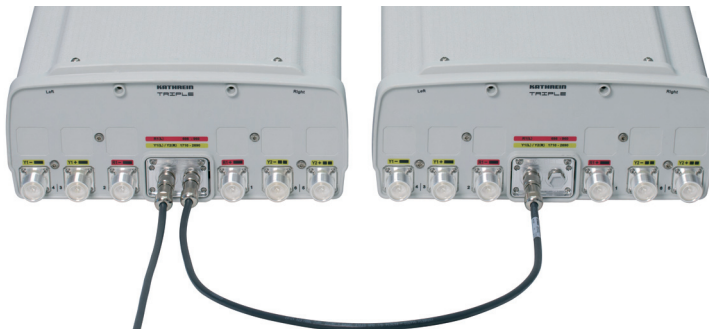
Connecting the control cables:



Connect a control cable to the daisy chain input of the FlexRET. The tightening torque for fixing the connector must be 0.5 – 1.0 Nm ('hand-tightened'). The connector should be tightened by hand or by a special torque screw driver (order no. 85010080). See also data sheet for Kathrein AISG-cable (86010007, ...).

Please note: To ensure the tightness of the RET System, Kathrein recommend the use of Kathrein components only.

Please note: If the daisy chain output is not used, do not remove the protection cap.



For daisy chain operation, remove the protection cap and attach a control cable to interconnect with the daisy chain input of the subsequent FlexRET or external RCU.

Please note: Do not remove the protection cap on the daisy chain output of the last FlexRET or RCU device.

FCC – Statements

FCC § 15.19

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC § 15.105

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Canada CNR-Gen Section 7.1.3

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

ICES-003

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

FCC § 15.21 (Warning Statement)

[Any] changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Compliance Information Statement (Declaration of Conformity Procedure)

Responsible Party: Kathrein Inc., Scala Division

Address: PO Box 4580, Medford Oregon . 97501

Telephone: (+01)541 779 6500

Type of Equipment:



Model Name: FlexRET
FCC ID SP3-86010153